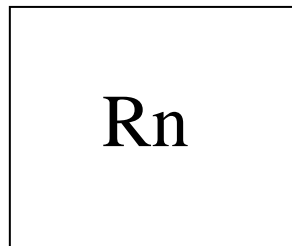


Atomic Structure, Ions and Charge – Oh my!

Warm-up:

- Copy the key from your periodic table (include the labels for each number)

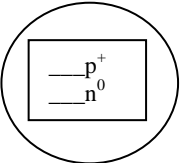
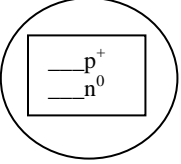
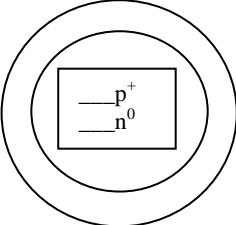


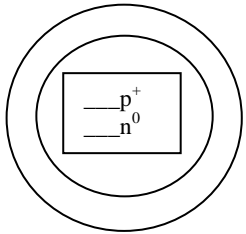
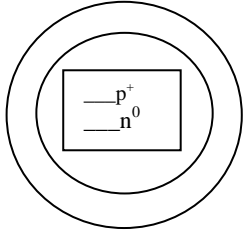
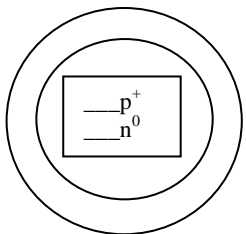
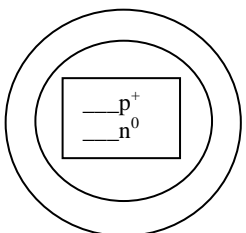
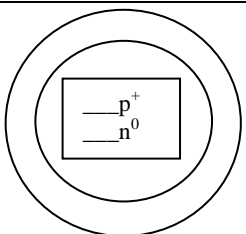
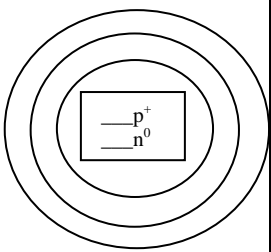
- The **atomic number** represents the number of _____.
- Atomic weight** is listed on the periodic table but is not a whole number. You figure out the element's most common **mass number** by _____.
- The **mass number** tells us the number of _____ + _____.

Part I

- Atoms** of any element have an **equal number** of _____ and _____.
Therefore, atoms have an overall **neutral charge**, or, in other words, a charge of _____.
- Things in nature seek their most stable (or _____ energy) form. The most stable **electron configuration** is when an energy level is either _____ or _____.
- For the first 20 elements, the energy levels are full when they hold:
 - 1st energy level: _____ electrons
 - 2nd energy level: _____ electrons
 - 3rd energy level: _____ electrons
 - Just like on a bus, electrons take the empty seats before sitting next to someone else.
Therefore, e^- should only be **paired** after there are _____ e^- on the 2nd or 3rd rings.

PRACTICE! Complete all the columns except the last column – for now!

Element Symbol & Name	# p ⁺	Mass # (round the atomic wt!)	most common # of neutrons	# electrons	Bohr Model (mark each electron as an "x")	1. In a new color, add or remove e^- to make the most stable ion. 2. List the charge of that ion below
H Hydrogen	1	1	0	1		
He						
Li						

B						
C						
N						
O						
F						
Mg						

Part II

- Ions of any element have **gained or lost** _____, which means they have a **positive or negative** _____.
- Therefore, ions are **neutral** // **not neutral** (*circle one*).
 - When an atom gains e^- , its charge becomes _____ and is called an _____
 - When an atom loses e^- , its charge becomes _____ and is called a _____
- Next, go back and complete the last column!